

tal to patient care. Language barriers between patient and prehospital health care providers are a significant problem in south Texas, especially in the border communities, where Spanish is commonly spoken, and in urban areas with a high immigrant population. The Texas Workforce Commission has reported that bilingual and Spanish-speaking residents comprise more than 20 percent of the population of rural Texas.

According to the Texas Board of Medical Examiners 2003 data, the number of physicians practicing in urban areas is more than eleven times as high as in rural/frontier areas. Residents living in these rural/frontier areas of Texas have less access to specialized care in cardiovascular diseases, emergency medicine, geriatric and pediatric specialties, and primary care medicine than do residents in the more densely populated urban areas. Most rural residents must travel far from home for medical care and stabilization.

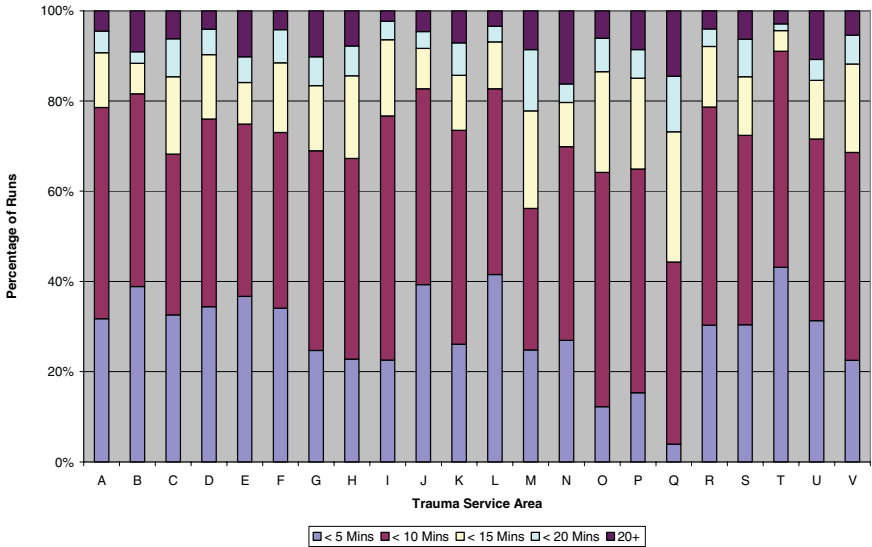
The majority of challenges faced by EMS providers can be placed into one or more of the following four categories:

- Recruiting and retention of employees.
- Providing adequate initial and advanced training, as well as continuing education. *This includes medical personnel as well as administrative and managerial personnel.*
- Acquisition and maintenance of needed equipment.
- Adequate funding.

Salaries for EMS personnel are low, especially in rural and frontier areas, while the cost and time required to meet educational requirements can be high, so an individual interested in attending an EMS course must take into account what it takes to become certified (www.tdh.state.tx.us/hcqs/ems/scertlic.htm). There are many hardships, including the financial costs and time away from their families. Additionally, the travel distance and time involved, especially in rural and frontier areas, can be prohibitive (www.tdh.state.tx.us/hcqs/ems/jobdesc.htm).

Recruitment can be difficult in rural/frontier Texas because of a dependency on volunteer EMS personnel. Only 20 percent (3,000) of the approximate 15,000 paramedics in the state provide services in areas designated as rural or frontier. Approximately one-third of Texas EMS personnel are volunteers and work at least one full-time job in addition to volunteering, with the majority of these jobs being non-health related.

EMS Response Times by Trauma Service Area, 2002



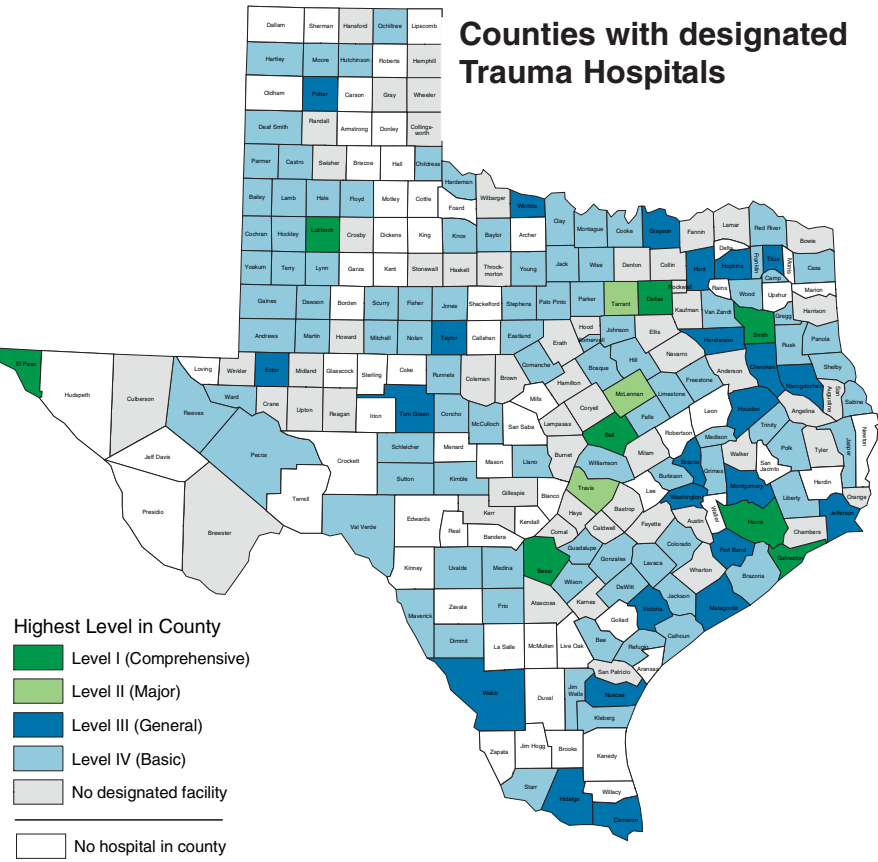
Challenges to employee recruitment and retention in urban areas include high call volumes, rapid job burnout and a high turnover rate of employees. Add in the daily traffic congestion and related transportation problems and it is easy to understand their dilemma.

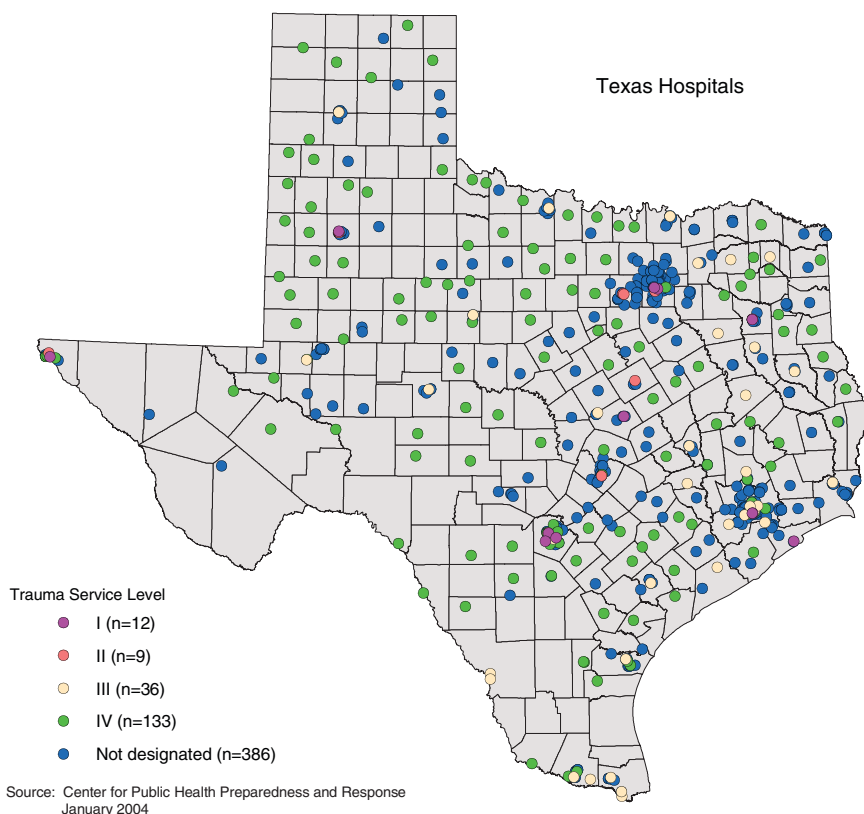
Specific to rural and frontier Texas, problems such as the lack of training, especially advanced training, and the inability to purchase equipment vital for the appropriate provision of emergency medical care, are resulting in the decline of certified and licensed emergency medical service providers in their regions of the state. Many ambulances are old, and costs to repair them are becoming prohibitive for the smaller departments.

Adequate funding affects EMS across the state regardless of location. All EMS providers have seen an increased demand for services, without a corresponding increase in funding, either from taxes or other sources of funding such as grants. Funding affects every aspect of providing adequate EMS, from purchase of equipment to training for street medics.

Many acute injuries or illnesses are time dependent, meaning the prognosis for survival is dependent on how rapidly the patient can get to the appropriate facility. According to data collected by the Texas Department of Health Bureau of Epidemiology (now a division of Texas DSHS,

Texas EMS/Trauma Registry, www.tdh.state.tx.us/injury/), there are areas throughout frontier Texas that have patient response times of up to 136 minutes (2 hours and 16 minutes) and hospital transport times of up to 132 minutes (2 hours and 12 minutes). What makes matters worse is these times represent areas throughout Texas that are not in the same geographic location. In addition, 157 of the 254 Texas counties currently have response times in excess of 10 minutes, while 151 counties have transport times greater than 20 minutes. (See chart on page 10.)





The rural and frontier areas of Texas are also less populated with designated trauma centers. Most hospitals are very small and have difficulty obtaining and maintaining trauma designation due to the associated costs. Those hospitals that are undesignated are often ill-prepared to care for major and severe trauma patients. The hospitals that are designated are usually designated at the lowest level and have very limited resources.

Level IV Trauma Centers are basically “stabilize and transfer” facilities that transfer-out patients requiring a higher level of care. Level III Trauma Centers receive trauma patients from lower level facilities and provide some tertiary care services. The resources of Level III Trauma Centers are varied. Those facilities in rural areas generally have less trauma